# USGS
## science for a changing world

Earthquake Shaking — Yellow Alert

GSN · USAID · ANSS

# M 5.9, 248 km NW of Tianpeng, China

Origin Time: 2022-06-09 17:28:37 UTC (Fri 01:28:37 local)
Location: 32.3646° N 101.8781° E Depth: 16.0 km

**PAGER Version 4**

Created: 5 days, 2 hours after earthquake

## Estimated Fatalities

- 65%
- 30%
- 4%

(Fatalities: 1, 10, 100, 1,000, 10,000, 100,000)
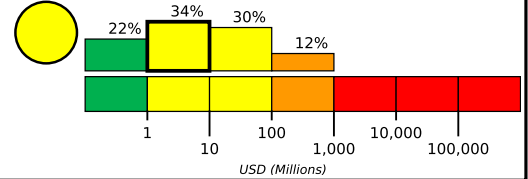
Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of China. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.
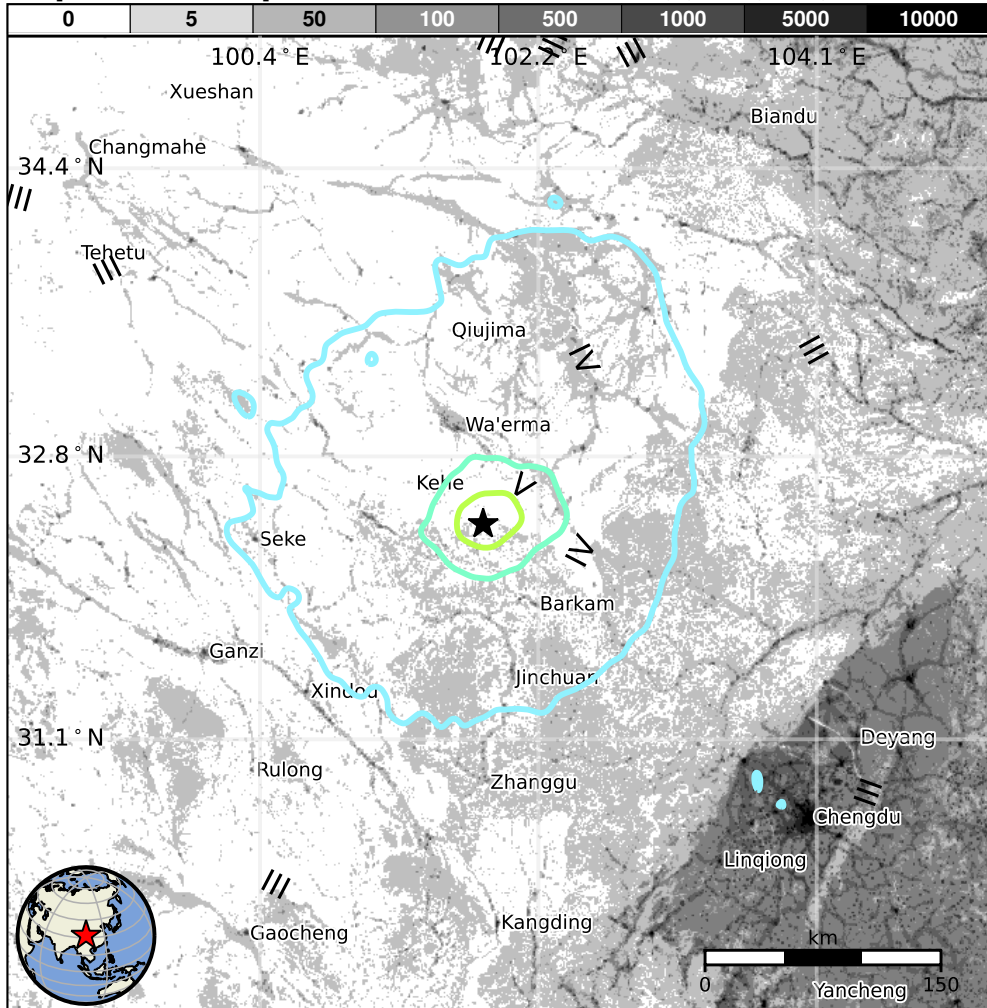
## Estimated Economic Losses

- 22%
- 34%
- 30%
- 12%

(USD (Millions): 1, 10, 100, 1,000, 10,000, 100,000)

## Estimated Population Exposed to Earthquake Shaking

| ESTIMATED POPULATION EXPOSURE (k=x1000) | –* | 35,123k* | 7,269k | 21k | 4k | 0 | 0 | 0 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| ESTIMATED MODIFIED MERCALLI INTENSITY | I | II-III | IV | V | VI | VII | VIII | IX | X+ |
| PERCEIVED SHAKING | Not felt | Weak | Light | Moderate | Strong | Very Strong | Severe | Violent | Extreme |
| POTENTIAL DAMAGE — Resistant Structures | None | None | None | V. Light | Light | Moderate | Mod./Heavy | Heavy | V. Heavy |
| POTENTIAL DAMAGE — Vulnerable Structures | None | None | None | Light | Moderate | Mod./Heavy | Heavy | V. Heavy | V. Heavy |

*Estimated exposure only includes population within the map area.

## Population Exposure

population per 1 sq. km from Landscan

Scale: 0  5  50  100  500  1000  5000  10000



## Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are adobe block and unreinforced brick with mud construction.

## Historical Earthquakes

| Date (UTC) | Dist. (km) | Mag. | Max MMI(#) | Shaking Deaths |
|---|---|---|---|---|
| 2003-11-13 | 319 | 5.1 | VI(45k) | 1 |
| 1986-08-06 | 359 | 5.3 | VI(1k) | 2 |
| 1973-02-06 | 171 | 7.7 | IX(31k) | 2k |

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

## Selected City Exposure

from GeoNames.org

| MMI | City | Population |
|---|---|---|
| IV | Rong'an | <1k |
| IV | Aba | <1k |
| IV | Qiongxi | <1k |
| IV | Hezhi | <1k |
| IV | Kuasha | <1k |
| IV | Longcang | <1k |
| III | **Chengdu** | **7,416k** |
| III | **Deyang** | **152k** |
| III | Mianyang | 264k |
| III | Leshan | 154k |
| III | Neijiang | 547k |

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us7000hg9p#pager

**Event ID: us7000hg9p**